

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1-192 (Cancelled)

193. (Currently Amended) A method of significantly increasing recovery of radioactivity from a reaction that produces a radiopharmaceutical composition of limited solubility either comprising:

adding benzyl alcohol to a reaction mixture that produces the radiopharmaceutical composition of limited solubility; or

reacting a radionuclide with a chelator, to form a radiolabeled chelate of limited solubility, and reacting the radiolabeled chelate with a stabilizer solution comprising benzyl alcohol.

194. (Previously Presented) A method according to claim 193, wherein the stabilizer solution further comprises ascorbic acid or a pharmaceutically acceptable salt thereof or EDTA.

195.-213. (Cancelled)

214. (Previously Presented) A method of claim 193, wherein the radiopharmaceutical composition comprises:

- a. a diagnostic or therapeutic radionuclide complexed with a metal chelator;
- b. an optional linking group; and
- c. a targeting molecule.

215. (Previously Presented) A method of claim 214, wherein the radiopharmaceutical composition comprises:

a compound of the general formula:

M-N-O-P-Q

wherein

M is a metal chelator complexed with a radionuclide;

N is O, an alpha amino acid, a non-alpha amino acid, or other linking group;

O is an alpha amino acid, or a non-alpha amino acid;

P is O, an alpha amino acid, a non-alpha amino acid, or other linking group; and

Q is a targeting peptide;

wherein at least one of N, O or P is a non-alpha amino acid with a cyclic group, complexed with a radionuclide.

216. (Previously Presented) A method of claim 214, wherein the radiopharmaceutical composition comprises:

a compound of the general formula:



wherein

M is a metal chelator complexed with a radionuclide;

N is O, an alpha amino acid, a substituted bile acid, or other linking group;

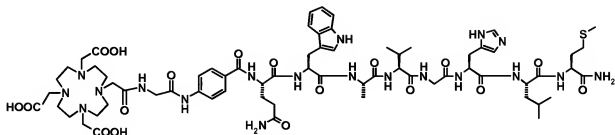
O is an alpha amino acid, or a substituted bile acid;

P is O, an alpha amino acid, a substituted bile acid, or other linking group;
and

Q is a targeting peptide;

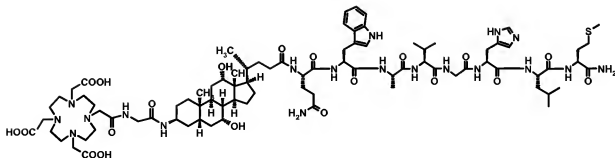
wherein at least one of N, O or P is a substituted bile acid, complexed with a radionuclide.

217. (Currently Amended) A method of claim 215, wherein the radiopharmaceutical radiopharmaceutical composition comprises a compound of the formula:



complexed with a radionuclide.

218. (Previously Presented) A method of claim 216, wherein the radiopharmaceutical composition comprises a compound of the formula:



complexed with a radionuclide.

219. (Previously Presented) The method of claim 193, wherein the chelator is selected from the group consisting of DTPA, DOTA, DO3A, HP-DO3A, PA-DOTA, MeO-DOTA, MX-DTPA, EDTA, TETA, EHPG, HBED, NOTA, DOTMA, TETMA, PDTA, TTHA, LICAM,

MECAM, CMDOTA, PnAO, oxa-PnAO, N,N-dimethylGly-Ser-Cys; N,N-dimethylGly-Thr-Cys; N,N-diethylGly-Ser-Cys; N,N-dibenzylGly-Ser-Cys, N,N-dimethylGly-Ser-Cys-Gly; N,N-dimethylGly-Thr-Cys-Gly ; N,N-diethylGly-Ser-Cys-Gly; and N,N-dibenzylGly-Ser-Cys-Gly.

220. (Previously Presented) The method of claim 214, wherein the targeting molecule is a targeting peptide.

221. (Currently Amended) The method of claim 220, wherein the targeting peptide is selected from the group consisting of LHRH, insulin, oxytocin, somatostatin, NK-1, VIP, Substance P, NPY, endothelin A, endothelin B, bradykinin, interleukin-1, EGF, CCK, galanin, MSH, Lanreotide, Octreotide, Maltose, arginine-vasopressin and analogs and derivatives thereof.

222. (Cancelled)

223. (Previously Presented) The method of claim 220, wherein the targeting molecule is a GRP receptor targeting molecule or an analog thereof.

224. (Previously Presented) The method of claim 220, wherein the targeting molecule is a GRP receptor targeting molecule or an analog thereof.

225. (Previously Presented) The method of claim 223, wherein the GRP receptor targeting molecule is an agonist or a peptide which confers agonist activity.

226. (Previously Presented) The method of claim 224, wherein the GRP receptor targeting molecule is bombesin or an analog thereof.

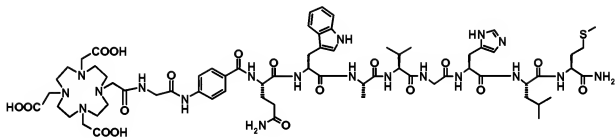
227. (Previously Presented) The method of claim 193, wherein the radionuclide is selected from the group consisting of ^{99m}Tc , ^{51}Cr , ^{67}Ga , ^{68}Ga , ^{47}Sc , ^{167}Tm , ^{141}Ce , ^{123}I , ^{125}I , ^{131}I , ^{18}F , ^{11}C , ^{15}N , ^{111}In , ^{168}Yb , ^{175}Yb , ^{140}La , ^{90}Y , ^{88}Y , ^{86}Y , ^{153}Sm , ^{166}Ho , ^{165}Dy , ^{166}Dy , ^{62}Cu , ^{64}Cu , ^{67}Cu , ^{97}Ru ,

^{103}Ru , ^{186}Re , ^{188}Re , ^{203}Pb , ^{211}Bi , ^{212}Bi , ^{213}Bi , ^{214}Bi , ^{225}Ac , ^{211}At , ^{105}Rh , ^{109}Pd , $^{117\text{m}}\text{Sn}$, ^{149}Pm , ^{161}Tb , ^{177}Lu , ^{198}Au and ^{199}Au and oxides or nitrides thereof.

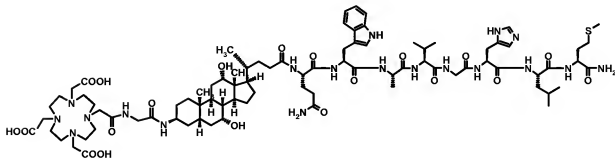
228. (Previously Presented) The method of claim 193 wherein the stabilizer solution further comprises a water soluble organic compound containing selenium in the +2 oxidation state.

229. (Previously Presented) The method of claim 227, wherein the water soluble organic compound containing selenium in the +2 oxidation state is selected from the group consisting of selenomethionine, selenocysteine and derivatives thereof.

230. (Previously Presented) The method of claim 228, wherein the radiopharmaceutical composition comprises a compound of the formula:



or a compound of the formula:



complexed with a radionuclide.